

12. Factor completely:  $4x^2 - 15x - 25$

$$(4x + 5)(x - 5)$$

13. Factor completely:  $6v^3 - 16v^2 + 21v - 56$

$$2v^2(3v - 8) + 7(3v - 8)$$
$$(2v^2 + 7)(3v - 8)$$

14. Factor completely:  $12x^3 + 2x^2 - 30x - 5$

$$2x^2(6x + 1) - 5(6x + 1)$$
$$(2x^2 - 5)(6x + 1)$$

**Part 5: Solving Quadratic Equations:**

15. Solve the following quadratic equations by **factoring**. You **must** show your work to receive credit. Please **box** your final answer.

a. Solve by factoring:  $x^2 - 11x = -30$

set to zero!  
 $+30 \quad +30$

$$x^2 - 11x + 30 = 0$$

$$(x - 6)(x - 5) = 0$$

solutions:  $x = 6$  and  $5$